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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,719	04/01/2004	Gary R. Knowles	A11-26455-US	1027
128	7590	10/21/2004	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			SAINT SURIN, JACQUES M	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/816,719	Applicant(s) KNOWLES ET AL.	
	Examiner Jacques M Saint-Surin	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004 and 23 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6, 8, 9, 12, 13 and 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-27 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 9, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-3, 5-6, 8-9 and 12-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 5 of U.S. Patent No. 6,722,197. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference between these claims is that in the patented case, the limitations of "wherein the first end of the at least one spring element and the second end of the at least one spring element form a straight line that comprises an axis of oscillation of the first proof mass and the second proof mass" are omitted. Clearly, applicant is attempting to obtain broader coverage in the claims of the application. The claims of the application are obvious over the claimed of the patented case and are not patentably distinct since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

As discussed above, claims 1 and 2 correspond substantially to claim 1 of the patent ('197).

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Regarding claims 5 and 6, they correspond substantially to claim 2 of the patent ('197) except for the limitations of "wherein the first end of each spring element and the second end of each spring element form a straight line that is parallel to a desired direction of oscillation of the first proof mass and the second proof mass". The omitted elements indicate that applicant is attempting to obtain broader coverage of in the claim of the application. Therefore the claims are rejected for the same reasons set forth in paragraph 2.

Regarding claims 8-9 and 12-13, they correspond substantially to claim 3 of the patent ('197) except for the limitations "wherein the first end of the at least one spring element is connected a side of the first proof mass that is closest to the second proof mass at substantially the midpoint of the side of the first proof mass and the second end of the at least one spring element is connected to a side of the second proof mass that is closest to the first proof mass at substantially the midpoint of the side of the second proof mass". The omitted elements indicate that applicant is attempting to obtain broader coverage of in the claim of the application. Therefore the claims are rejected for the same reasons set forth in paragraph 2.

### ***Claim Rejections - 35 USC § 102***

3      Claims 1 and 5 rejected under 35 U.S.C. 102(e) as being anticipated by Dyck et al. (US Patent 6,393,913).

Regarding claims 1 and 5, Dyck et al. ('913) shows in Fig. 1, a first proof mass (first mass 14) and second proof mass (second mass 20) and at least one spring element (spring 24). Note that spring 24 is attached between two masses 14 and 20 and therefore the spring inherently will compresses when the masses are moving

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toward each other and uncompresses when the masses are moving away from each other.

***Claim Rejections - 35 USC § 103***

4. Claims 1, 5, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US Patent 6,230,563) in view of Dyck et al. (US Patent 6,393,913).

Regarding claim 1, Clark et al. ('563) discloses a micromachined device (dual-mass gyroscope, see: Figs. 9 and 10), comprising :

a first proof mass (Fig. 9 shows first proof mass 130a) and a second proof mass (Fig. 9 shows second proof mass 130a), the first and second proof masses (130a and 131a) each having a plurality of support arms (124a, 125a, 126a, 127a) flexibly coupling the masses (130a and 131a) to a substrate (101b). Although Clark discloses a lever, it does not specifically disclose at least one spring element having a first end and a second end, the first end of the at least one spring element connected to the first proof mass and the second end of the at least one spring element connected to the second proof mass. Dyck et al. ('913) discloses a plurality of springs 24 coupled between the second mass 20 and first mass 14, see: col. 4, lines 13-17. Note that when a spring is attached between two objects or masses, inherently, the spring will compress when the objects or masses are moving toward each other and will uncompress when they are moving away from each other. It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Clark the spring of Dyck as taught above because the springs can bend in a plane parallel to the substrate to provide a relatively large displacement with a linear spring constant thereby making the above combination

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more effective for detecting strain, acceleration, rotation or movement in a reliable manner.

Regarding claim 5, as discussed above, it is rejected for the reasons set forth for claim 1. Furthermore, Dyck et al. shows in Fig. 10 a plurality of spring elements (16 and 24).

Regarding claims 8 and 12, as discussed above, they are rejected for the reasons set forth for claim 1. Furthermore, Clark et al. ('563) in view of Dyck shows in Fig. 9 a plurality of support arms (126a, 127a and 124a, 125a) attached to the first proof mass (130a) and the second proof mass (131a).

5. Claims 2-3, 6, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US Patent 6,230,563).

Regarding these claims, Clark ('563) shows in Fig. 9 a spring element (lever 128a) having a first end connected to first proof mass 130a and a second end connected to second proof mass 131a. However, Clark et al. ('563) does not specifically suggest the first end of the at least one spring element is connected to a side of the first proof mass that is closest to the second proof mass and the second end of the at least one spring element is connected to a side of the second proof mass that is closest to the first proof mass. Thus, it would have been an obvious matter of design choice to modify Clark for providing the claimed arrangement since applicant has not disclosed that the arrangement solves any stated problems or is for any particular purpose and it appears that the arrangement of Clark would perform equally well with the claimed arrangement.

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***Allowable Subject Matter***

6. Claims 15-27 are allowable over the prior art of record.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Yoshikawa et al. (US Patent 6,078,016) discloses a semiconductor accelerometer switch.


Hulsing, II (US Patent 6,276,203) discloses axis alignment method.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M Saint-Surin whose telephone number is (703) 308-3698. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

  
Jacques M. Saint-Surin  
October 14, 2004

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800